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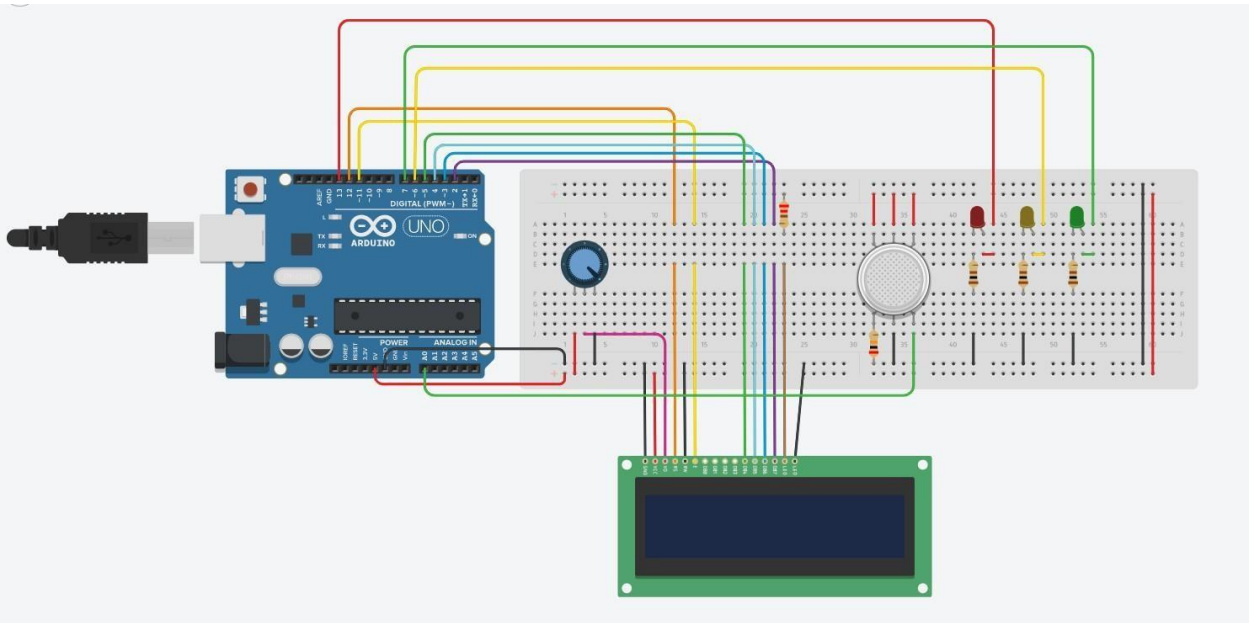
Device for detecting humidity in the room

For this project, I chose to perform a simulation in the TINKERCAD online environment.

The components used are as follows:

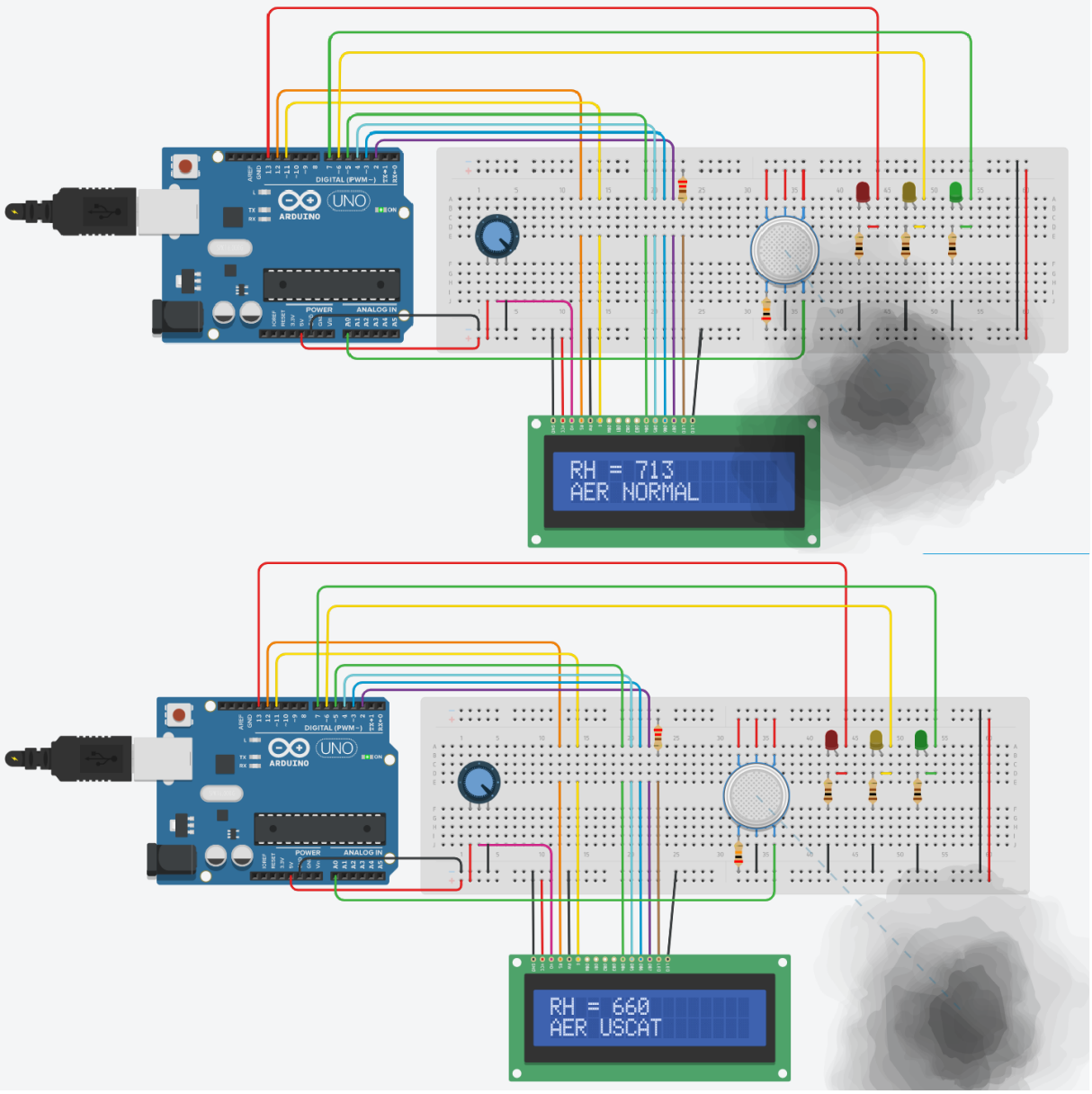
- Breadboard
- Arduino board
- 3 LEDs
- 5 resistors that protect the components from excessive currents
- 1 gas sensor
- 1 potentiometer
- 1 LCD 16x2

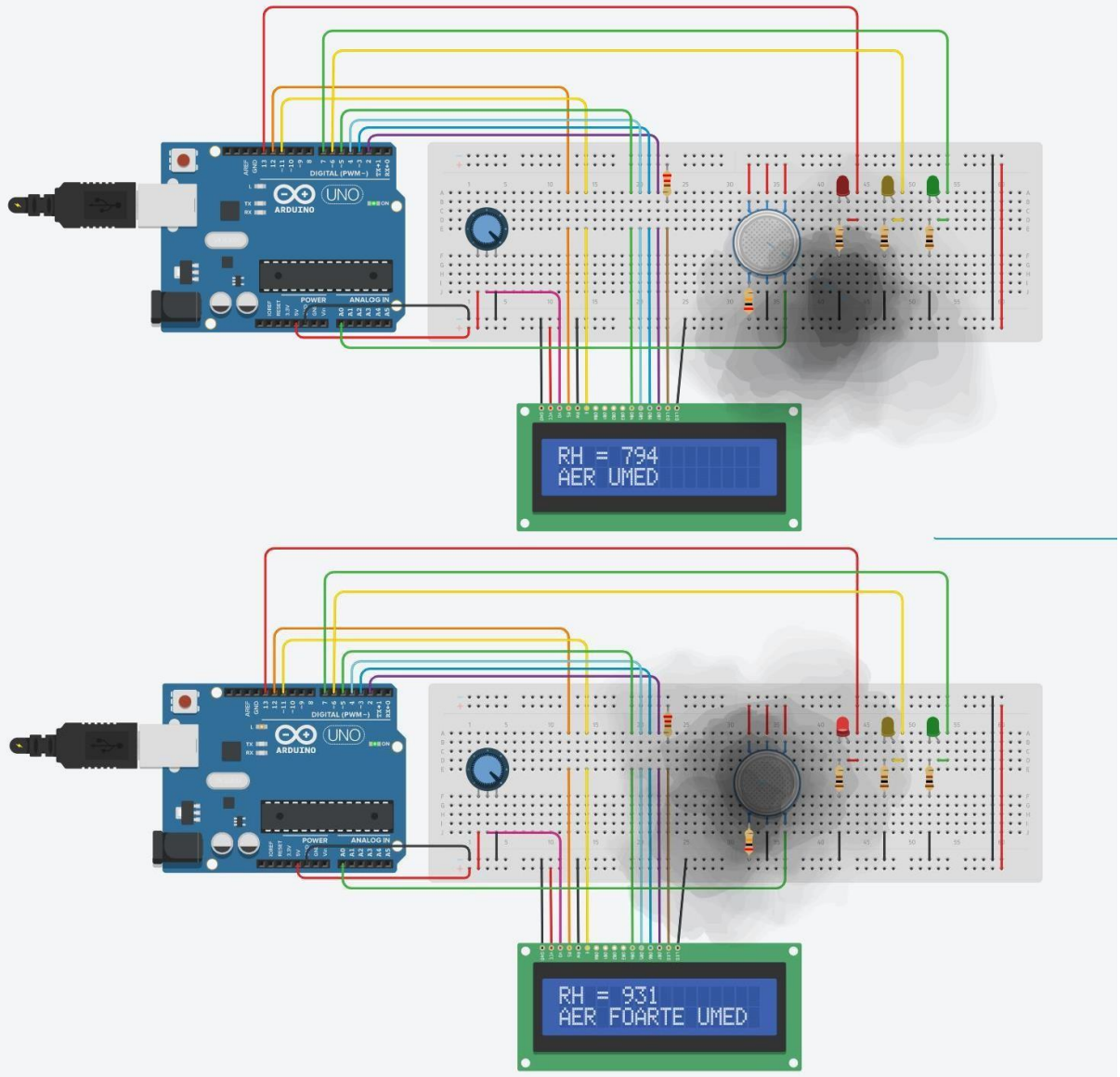


Operation mode: After starting the simulation, the device collects data from the air. I used a gas sensor to simulate an effect similar to a water vapor cloud with a specific concentration of water. As we move closer or farther away from the cloud, the LCD will indicate the relative humidity (RH) in the air. It serves as a warning to let you know if the air is within the desired parameters or not. At the same time, a small light bulb will illuminate based on the message displayed on the LCD.

Since I didn't have a sensor to collect data from the air, I implemented the idea in which, as we move the "cloud" away from the air, the relative humidity (RH) decreases, and it increases when we bring the "cloud" closer.

Example: In the case where the air is within normal parameters, the LCD displays the RH, the corresponding message ("Normal Air"), and the green light bulb turns on.




RH = 794
AER UMED
RH = 931
AER FOARTE UMED